Appl. No.: 09/486,677
Reply to March 21, 2006 Office Action
Group Art Unit: 1621

Remarks

The following remarks are responsive to the March 21, 2006 Office Action. Reconsideration is respectfully requested.

Status of the Claims

Claims 10, 14-26 and 30 are pending.

Rejection under 35 U.S.C. § 103(a)

Claims 10, 14-26 and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese application No. 7-303825 (Tominaga) alone, or in view of U.S. Patent No. 4,731,378 (Naik) or U.S. Patent No. 4,999,041 (Grossman).

As stated by the Examiner, the object of Tominaga is to lower the pour point of a non-ionic surfactant obtained by random addition of 5-15 moles of ethylene oxide and 0.3-5.0 moles of propylene oxide to an alcohol containing at least 50%-60 wt. % of a saturated linear fatty C_{8-18} alcohol. A pour point of 20-25°C or lower is disclosed.

Applicants maintain that there is no teaching, suggestion or motivation provided by Tominaga to (1) select the average number of EO units present in each random fatty alcohol alkoxylate to have a value of from about 3 to about 5, and (2) select the average number of PO units present in each random fatty alcohol alkoxylate to have a value of from about 2 to about 2.5. In addition, there is no disclosure whatsoever in Tominaga concerning (or exemplifying) a cold cloud point. The only disclosure of cold cloud point is in Applicants' disclosure. Therefore, Applicants maintain that there is no teaching, suggestion or motivation, in combination with selecting components (1) and (2), to achieve a cold cloud point below 0°C as claimed.

The Examiner alleges (page 6 of the Action) that "the cold cloud point is related to the low temperature behavior of the random polymers. Thus the cold cloud point . . .

appears to be similar to the pour point of Tominaga". *Emphasis added.* Applicants respectfully assert that the Examiner incorrectly presumes that cold cloud point can be correlated to pour point. Cloud point may be defined as the temperature at which waxy solid material appears in a petroleum product as it is cooled. Pour point may be defined as the lowest temperature at which a liquid will flow. (*See*, definitions from *Hawley's Condensed Chemical Dictionary,* Twelfth Ed., Van Nostrand Reinhold Company, 1993). Based on the definitions, cloud point and pour point represent completely different properties, and therefore cannot be construed as having a reciprocal relation or as being interchangeable.

Based on the above definitions, cloud point is different than pour point. There is no disclosure whatsoever of cloud point (or cold cloud point) in Tominaga. The only disclosure of cold cloud point is provided by Applicants. In addition, there is no teaching or suggestion (express or implied) by Tominaga that the lower pour point results in a lower cloud point. The product of Tominaga is disclosed in the specification (page 2, lines 7-17) as tending to precipitate in storage at temperatures below 0°C. Thus, the lower pour point of Tominaga does not result in a cloud point below 0°C as claimed. Therefore, the allegations (page 6 of the Action) that "Tominaga . . . provides a teaching to use a cold cloud point below 0°C as claimed" and that "Tominaga . . . further motivates one to use lower cold cloud points" are unfounded.

Presuming, *arguendo*, that "Tominaga . . . teach[es] the ordinary skilled artisan to obtain non-ionic surfactants having good low temperature behavior and provides means for obtaining such" (alleged on page 6 of the Action), one skilled in the art still would not be led by Tominaga to achieve a cold cloud point below 0°C as claimed for reasons set forth above. The addition of Naik (relating to surfactants in agrochemicals and pesticides) or Grossman (relating to surfactants with herbicides) fails to remedy the deficiencies of Tominaga, each of which fails to teach, suggest or provide motivation to one skilled in the art at the time of the invention to select the claimed components (1)

and (2) to achieve a cold cloud point below 0°C as claimed with any reasonable expectation of success. Therefore, in view of the lack of express or implied teaching, suggestion or motivation from Tominaga, when considered individually or in combination with Naik or Grossman to select the claimed components (1) and (2) to achieve a cold cloud point below 0°C as claimed, a *prima facie* case of obviousness has not been made. The invention of Claims 10, 14-26 and 30 is not rendered obvious in view of the cited references, and the rejection should be withdrawn. Reconsideration and withdrawal of the rejection are respectfully requested.

Fees

No fees are believed due, but the Commissioner is authorized to charge (or credit any balance) any fees deemed due (or owing) to Deposit Account No. 50-1177.

Conclusion

It is respectfully submitted that Claims 10, 14-26 and 30 are in condition for allowance. A Notice of Allowance is respectfully requested. If anything further is needed to advance the allowance of this application, the Examiner is urged to contact Applicants' attorney at the telephone number indicated below.

Respectfully submitted,

June 20, 2006
Date

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by ozone followed by hydrolysis in the presence of powdered zinc.

Cleland's reagent. See dithiothreitol.

Clemmensen reaction. The Clemmensen method of reduction (1913) consists in refluxing a ketone with amalgamated zinc and hydrochloric acid. Acetophenone, for example, is reduced to ethylbenzene. The method is applicable to the reduction of most aromatic-aliphatic ketones to at least some aliphatic and alicyclic ketones, to the γ-keto acids obtainable by Friedel-Crafts condensations with succinic anhydride (succinolylation), and to the cyclic ketones formed by intramolecular condensation.

Cleveland Open Cup. See COC.

Cleve's acid. (1-naphthylamine-6-sulfonic acid).
Properties: Colorless needles, slightly soluble in water, mp >330C.
Derivation: Nitration of naphthalene-β-sulfonic acid. On reduction with iron, this yields a mixture of 1-naphthylamine-6-sulfonic acid (Cleve's acid) and 1-naphthylamine-7-sulfonic acid (or Cleve's acid-1,7). The latter is separated by crystallization as the sodium salt, the 1,6-acid precipitates on acidification.
Use: Azo-dye intermediate.

Cleve's acid-1,7 (1-naphthylamine-7-sulfonic acid).
See Cleve's acid.

cliffstone Paris white. A special grade of whiting made from a hard grade of English chalk.

clinical chemistry. A subdivision of chemistry that deals with the behavior and composition of all types of body fluids, including the blood, urine, perspiration, glandular secretions, etc. It involves analysis and testing of these for content of numerous metabolic constituents as well as foreign materials; thus, it also includes toxicological factors.

clinoptilolite. A natural, inorganic zeolite used as a selective ion-exchange medium for removal of ammonia from plant waste water.

clomiphene. See 1-chloro-2-(4-diethylaminoethoxyphenyl)-1,2-diphenylethylene.

clopidol. (3,5-dichloro-2,6-dimethyl-4-pyridinol; Coyden). CAS: 2971-90-6.
$C_7H_7Cl_2NO$. A penta-substituted pyridine derivative.
Properties: A solid with mw 192.06, mp > 320C. Insoluble in water.
Hazard: Toxic. TLV: 10 mg/m³.

cloud point. In petroleum technology, the temperature at which a waxy solid material appears as a diesel fuel is cooled. This material is harmful to engine performance.

cloud seeding. See nucleation.

clove oil. (caryophyllus oil). An essential oil distilled from cloves. Optically active.
Use: Medicine (local), flavoring, dentistry, perfumery, confectionery, soaps.

clupanodonic acid. $C_{21}H_{35}COOH$. Derived from herring oil.

clupeine. A protamine (simple protein) from herring. Contains no sulfur.
Properties: Water-soluble.

cluster catalysis. See under catalysis.

Cm. Symbol for curium.

"CM" [*Du Pont*]. TM for a flame-retardant composition based on ammonium sulfamate and modified to prevent afterglow and to improve penetration.
Properties: Fine, white granules; soluble in water; insoluble in dry-cleaning solvents.
Use: Treatment of fabrics, paper, paper products, and other cellulosic materials.

CMA. Abbreviation for Chemical Manufacturers Association.

CMC. See carboxymethylcellulose.

CM-cellulose. Abbreviation for carboxymethylcellulose, used especially by biochemists.

CMHEC. Abbreviation for carboxymethyl hydroxyethyl cellulose.

CMP. Abbreviation for cytidine monophosphate. See cytidylic acid.

CMPP. Abbreviation for 2-(4-chloro-2-methylphenoxyl)propionic acid.
See mecoprop.

CMRA. Abbreviation for Chemical Marketing Research Association.

CMU. Abbreviation for chlorophenyldimethylurea.
See monuron.

CNS. Abbreviation for central nervous system (applied to the action of certain drugs).

Co. Symbol for cobalt.

potassium titanate fiber. Approximate composition $K_2O \cdot (TiO_2)_n$ where n is 4–7.
Properties: High refr index, mp 1371C, can diffuse and reflect infrared radiation.
Use: Rockets, missiles, nuclear-powered applications as an insulator, especially for the range 1300–2100F.

potassium titanium fluoride. See titanium potassium fluoride.

potassium titanium oxalate. See titanium potassium oxalate.

potassium trichlorophenate. $Cl_3C_6H_2OHK$.
Offered as a solution containing 47% potassium trichlorophenate, and 3% other potassium chlorophenates, d 1.3, fp −9C.
Use: Slime control agent for pulp and paper mill systems.

potassium tripolyphosphate. (KTPP). $K_5P_3O_{10}$.
Properties: White, crystalline solid; mp 620–640C; d 2.54; loose bulk d 67 lb/cu/ft; solubility in water (26C) more than 140 g/100 mL water.
Use: Water-treating compounds, cleaners, specialty fertilizers, sequestrant.

potassium trithiocarbonate. See potassium sulfocarbonate.

potassium tungstate. (potassium orthotungstate; potassium wolframate). CAS: 7790-60-5. $K_2WO_4 \cdot 2H_2O$.
Properties: Heavy crystalline powder, d 3.1, mp 921C, deliquescent, soluble in water, insoluble in alcohol.

potassium undecylenate. $CH_2{:}CH(CH_2)_8COOK$.
Properties: Finely divided white powder, decomposes above 250C, limited solubility in most organic solvents, soluble in water.
Hazard: Toxic in high concentration.
Use: Bacteriostat and fungistat in cosmetics and pharmaceuticals.

potassium wolframate. See potassium tungstate.

potassium xanthate. (potassium ethyldithiocarbonate; potassium xanthogenate; potassium ethyl xanthate; potassium ethylxanthogenate). CAS: 140-89-6. $KS_2COC_2H_5$.
Properties: Colorless or light yellow crystals, soluble in water and alcohol, insoluble in ether, d 1.558 (21.5C).
Derivation: Reaction of potassium ethylate and carbon disulfide.
Hazard: Toxic by ingestion.
Use: Fungicide for soil treatment, reagent in analytical chemistry.

potassium zinc iodide. (zinc potassium iodide). $ZnI_2 \cdot KI$.
Properties: Colorless crystals, very hygroscopic.
Use: Analysis (testing for alkaloids).

potassium zinc sulfate. See zinc potassium sulfate.

potassium zirconifluoride. See zirconium potassium fluoride.

potassium zirconium chloride. See zirconium potassium chloride.

potassium zirconium sulfate. See zirconium potassium sulfate.

potentiator. A term used in the flavor and food industries to characterize a substance that intensifies the taste of a food product to a far greater extent than does an enhancer. The most important of these are the 5′-nucleotides. They are approved by the FDA. Their effective concentration is measured in parts per billion, whereas that of an enhancer such as MSG is in parts per thousand. The effect is thought to be due to synergism. Potentiators do not add any taste of their own, but intensify the taste response to substances already present in the food.
See also enhancer; seasoning; flavor.

pot life. See adhesive working life.

potting compound. See encapsulation.

pour point. (1) The lowest temperature at which a liquid will flow when a test container is inverted. (2) The temperature at which an alloy is cast.

pour point depressant. An additive for lubricating and automotive oils that lowers the pour point (or increases the flow point) by 11.0C. The agents now generally used are polymerized higher esters of acrylic acid derivatives. They are most effective with low-viscosity oils.

powder. Any solid, dry material of extremely small particle size ranging down to colloidal dimensions, prepared either by comminuting larger units (mechanical grinding), by combustion (carbon black, lamp-black), or by precipitation via a chemical reaction (calcium carbonate, etc.). Powders that are so fine that the particles cannot be detected by rubbing between thumb and forefinger are called impalpable. Typical materials used in powder form are cosmetics, inorganic pigments, metals, plastics (molding powders), dehydrated dairy products, pharmaceuticals, and explosives. Metal powders are used to make specialized equipment by sintering